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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,240	09/16/2003	D. Ridgely Bolgiano	I-1-0065.10US	3692

24374 7590 07/06/2007

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EXAMINER	
WILSON, ROBERT W	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
07/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/663,240	BOLGIANO ET AL.	
	Examiner	Art Unit	
	Robert W. Wilson	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :9/16/03, 12/16/03, 4/13/05, 4/25/05, 2/17/06, 5/15/06, 5/22/06, 7/17/06, 9/14/06, 2/20/07, & 2/26/07.

Claim Objections

1. Claims 5 & 6 are objected to because of the following informalities:

Referring to claim 5 the examiner objects to the limitation "means for each received first spread spectrum, for transmitting a second spread spectrum" because this limitation has a confusing meaning. It is confusing whether applicant is claiming a means for receiving and another means for transmitting or whether the applicant has a means for receiving a signal which is going to be used to transmit a second signal. Further referring to claim 5, the examiner objects to the usage of "user" when the examiner believes the applicant means wireless user in the following limitation " means for determining a distance measurement between each antenna and the user based". The examiner recommends that applicant clarify the claim. Appropriate correction is required.

Referring to claim 6 the examiner objects to the limitation "means for each received first spread spectrum, for transmitting a second spread spectrum" because this limitation has a confusing meaning. It is confusing whether applicant is claiming a means for receiving and another means for transmitting or whether the applicant has a means for receiving a signal which is going to be used to transmit a second signal. The examiner recommends that applicant clarify the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-6 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claims 1-6, the examiner cannot find support in the specification supporting:

"receiving the second spread spectrum signals at the plurality of antennas. Determining the distance measurement between each antenna and the wireless user based on in part of a received timing of the second signals and determining the wireless user's location based on in part the distance determination" as claimed in claim 1;

"means for each received first spread spectrum signal, for transmitting a second spread spectrum signal having an associated code having a same phase as that received first spread spectrum

signal; means for receiving the second spread spectrum signals at the plurality of antennas; means for determining a distance measurement between each antenna and the user based on in part of a received timing of the second signals; and means for determining the wireless user's location based on in part of the distance measurement" as claimed in claim 5;

or "means for receiving a range determination form each of the plurality of antennas; and means for determining a location of the wireless user using the received range determinations" as claimed in claim 6.

The applicant has claimed priority back to 9/6/1994 based upon division of 08/301,230 which became patent No.: 5,614,914. The applicant's specification does not appear to support these claimed limitations; therefore, the examiner because that the filing date of 9/16/03 would be more appropriate for the claimed invention.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. The examiner reviewed the drawing and could not find a drawing which supported the following claim limitations:

"receiving the second spread spectrum signals at the plurality of antennas. Determining the distance measurement between each antenna and the wireless user based on in part of a received timing of the second signals and determining the wireless user's location based on in part the distance determination" as claimed in claim 1;

"means for each received first spread spectrum signal, for transmitting a second spread spectrum signal having an associated code having a same phase as that received first spread spectrum signal; means for receiving the second spread spectrum signals at the plurality of antennas; means for determining a distance measurement between each antenna and the user based on in part of a received timing of the second signals; and means for determining the wireless user's location based on in part of the distance measurement" as claimed in claim 5;

or "means for receiving a range determination form each of the plurality of antennas; and means for determining a location of the wireless user using the received range determinations" as claimed in claim 6.

Therefore, the limitations in claims 1-6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling (U.S. Patent No.: 5,881,094) in view of Riaz (Time Division Duplex Transmission of Direct Sequence Spread Spectrum Signals in Multipath Channels which is an IDS document of record; henceforth, referred to as Riaz.

Referring to claim 1 Schilling teaches, A method for locating a wireless user (method for locating a remote unit (wireless user) per col. 8 lines 35 to 50), the method comprising:

transmitting from an of antennas a first spread spectrum signal having an associated code (Base Station transmits from a single antenna per Fig 1 a CDMA spread spectrum (first signal) which has an inherent code per col. 8 lines 36 to 50)

receiving the first spread spectrum signal at the wireless user (The remote unit (wireless user) receives the CDMA spread spectrum (first signal) per col. 8 lines 36 to 50) transmitting a second spread spectrum signal having an associated code having a same phase as that received from the first spread spectrum signal (The remote unit (wireless user) repeats the same signal back to the base station (transmits a second signal) the repeated signal will inherently have the same phase as the first signal because the signal is repeated per col. 8 lines 36 to 50)

receiving the second spread spectrum signal at the antenna (The Base Station has a receiver with a single antenna per Fig 2 that receives the repeated signal or second spread spectrum signal per col. 8 lines 36 to 50)

determining a distance measurement between the antenna and the wireless user based on in part a received timing of the second signal (distance is determined between the remote unit (wireless user) and the antenna on the base station based upon sending a timing or a mark signal per col. 8 lines 35 to 50) and

determining the wireless user's location based on in part the distance determinations (Remote units location can be determined based upon distance to multiple base station per col. 8 lines 35 to 50)

Schilling does not expressly call for: plurality of antenna

Riaz teaches: utilizing a plurality of antennas (employing more than one antenna at a base station per Para 1 per Pg 1572 to Para 2 Pg 1573)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the plurality antennas of Riaz to the base station of Schilling in order to perform diversity processing which will improve the performance of a CDMA system in a fading environment.

In addition Schilling teaches:

Regarding claim 2, wherein determining the location of the wireless user (Remote user) is determined at the wireless user (col. 8 lines 35 to 50)

Regarding claim 3, further comprising the antenna transmit the distance determination to the wireless user (The Base Station determines range or distance. The remote determined location

based upon distance to more than two base stations so the base station inherently transmits the range or distance per col. 8 lines 35 to 50)

Regarding claim 4, comprising the wireless user receiving the distance determinations (The Base Station determines range or distance. The remote determined location based upon distance to more than two base stations so the base station inherently transmits the range or distance per col. 8 lines 35 to 50)

Referring to claim 5, Schilling teaches: A wireless communication system (Figs 1 & 2) for geographically location a wireless user (remote units per col. 8 lines 35 to 50) the system comprising:

Means for transmitting from a single antenna a first spread spectrum signal having an associated code (Base Station with 108 per Fig 1 or means for transmitting. The Base Station transmits from a single antenna per Fig 1 a CDMA spread spectrum (first signal) which has an inherent code per col. 8 lines 36 to 50 a CDMA spread spectrum (first signal) which has an inherent code per col. 8 lines 36 to 50)

Means for receiving of the first spread spectrum signals at the wireless user (Remote unit (wireless user) has 122 per Fig 2 or means for receiving. The remote unit (wireless user) receives the CDMA spread spectrum (first signal) per col. 8 lines 36 to 50) for transmitting a second spread spectrum signal having an associated code having a same phase as that received from the first spread spectrum signal (The remote unit (wireless user) repeats the same signal back to the base station (transmits a second signal) the repeated signal will inherently have the same phase as the first signal because the signal is repeated per col. 8 lines 36 to 50)

Means for receiving the second spread spectrum signals at an antenna (Base Station has 122 per Fig 2 or means for receiving. The Base Station has a receiver with a single antenna per Fig 2 that receives the repeated signal or second spread spectrum signal per col. 8 lines 36 to 50)

Means for determining a distance measurement between the single antenna and the user based on in part a received timing of the second signal (The Base Station utilizes the combination of 128 & 129 per Fig 2 or means for determining distance. The distance is determined between the remote unit (wireless user) and the antenna on the base station based upon sending a timing or a mark signal per col. 8 lines 35 to 50) and

Means for determining the wireless user's location based on in part the distance determinations (The remote unit (wireless user) determining the wireless user's location based on in part the distance determinations (Remote units location can be determined based upon distance to multiple base station per col. 8 lines 35 to 50)

Schilling does not expressly call for: plurality of antenna

Riaz teaches: utilizing a plurality of antennas (employing more than one antenna at a base station per Para 1 per Pg 1572 to Para 2 Pg 1573)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the plurality antennas of Riaz to the base station of Schilling in order to perform diversity processing which will improve the performance of a CDMA system in a fading environment.

Referring to claim 6, Schilling teaches: A wireless user capable of being located, the wireless user (remote units or wireless user being able to determine location per col. 8 lines 35 to 50) the wireless user comprising:

Means for receiving of the first spread spectrum signals at the wireless user (Remote unit (wireless user) has 122 per Fig 2 or means for receiving. The remote unit (wireless user) receives the CDMA spread spectrum (first signal) per col. 8 lines 36 to 50) for transmitting a second spread spectrum signal having an associated code having a same phase as that received from the first spread spectrum signal (The remote unit (wireless user) repeats the same signal back to the base station (transmits a second signal) the repeated signal will inherently have the same phase as the first signal because the signal is repeated per col. 8 lines 36 to 50)

Means for receiving the second spread spectrum signals at an antenna (Remote use (wireless user) has 122 per Fig 2 or means for receiving. The Base Station has a receiver with a single antenna per Fig 2 that receives the repeated signal or second spread spectrum signal per col. 8 lines 36 to 50)

Means for determining the wireless user's location based on in part the distance dterminations (The remote unit (wireless user) determining the wireless user's location based on in part the distance determinations (Remote units location can be determined based upon distance to multiple base station per col. 8 lines 35 to 50)

Schilling does not expressly call for: plurality of antenna

Riaz teaches: utilizing a plurality of antennas (employing more than one antenna at a base station per Para 1 per Pg 1572 to Para 2 Pg 1573)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the plurality antennas of Riaz to the base station of Schilling in order to perform diversity processing which will improve the performance of a CDMA system in a fading environment.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. VU can be reached on 571/272-73155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert W. Wilson

Robert W Wilson
Examiner
Art Unit 2616

RWW
6/26/07